

# Superlattice Schematic

## Electrochemical formation of Superlattices

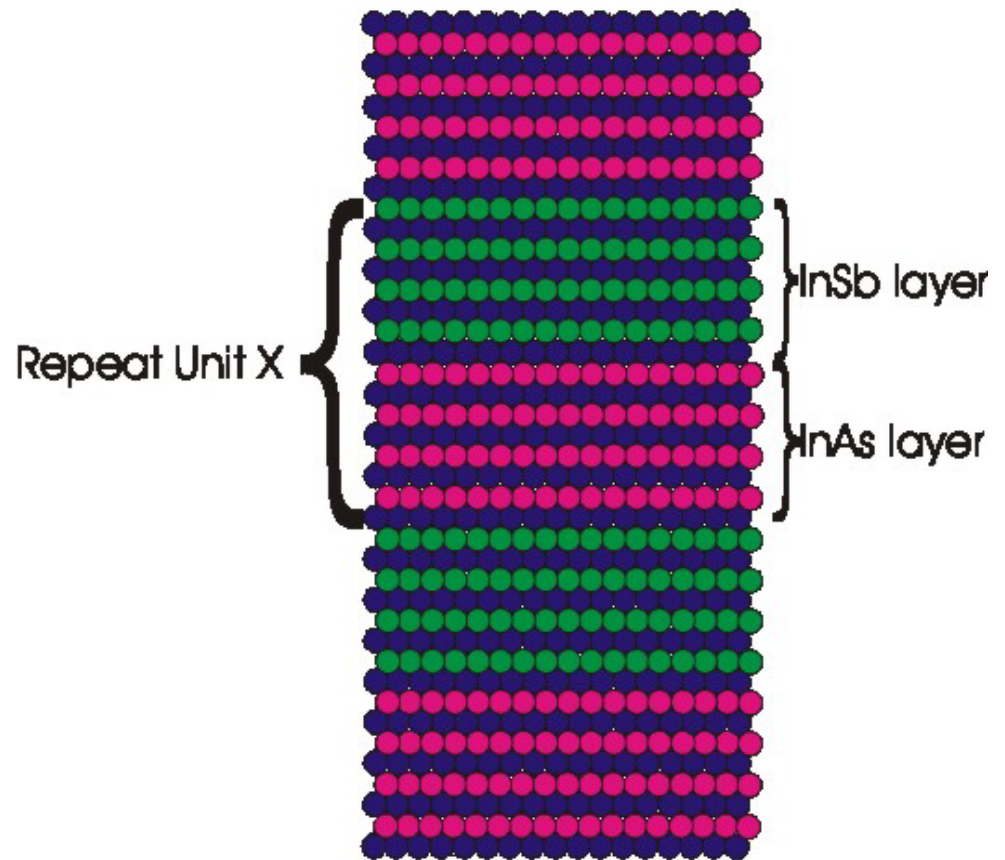
John L. Stickney

University of Georgia

NSF-DMR 0312130

Superlattices can result in quantum confinement effects, when the compound layers are similar to the Bohr radii for excitons in the component semiconductor thin films.

In ECALE, the formation of a superlattice is a simply a mater of alternating the solutions used and the potentials. The first superlattice formed by ECALE with more then a couple periods was InSb/InAs. Much better results have been had recently using PbSe/PbTe.



This drawing shows the ideal structure of a superlattice with distinct interfaces between compounds. The nomonclature for this structure is InAs<sub>4</sub>/InSb<sub>4</sub>-X.

# Electrochemical formation of Superlattices

John L. Stickney

University of Georgia

NSF-DMR 0312130

Discussions with the Clark County School System, Athens, Georgia, by the P.I. have lead to establishment of a program for predominantly minority grammar schools in the district. The concept is to promote science at the forth and fifth grade levels, through visits by program participants at UGA. This program will include faculty, graduate, and undergraduate students.

The idea is for a UGA participant to pick a minority school and commit to visit once a semester for the day, as a minimum, visiting the forth and fifth grade classes, and presenting a topic designed to help and accentuate the science curriculum for that school. This will provide close contact between scientists and at risk children. The children will see the same scientist at least four times before they go on to middle school.

The size of the program will be a function of the number of UGA participants. Once the local school district has been subscribed, the next targets will be intercity schools in Atlanta.

Presently, strong interest has been shown by a number of faculty in the department of Chemistry, and meetings are set up with the chemistry graduate student organization and the undergraduate student affiliates.